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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,605	10/18/2005	Ryuji Suzuka	01165.0946	6011
22852 7590 10/17/2007 FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER HUTCHINSON, SHAWN R	
			ART UNIT 4174	PAPER NUMBER
			MAIL DATE 10/17/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/553,605

Applicant(s)

SUZUKA ET AL.

Examiner

Shawn R. Hutchinson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 9-11 is/are rejected.
- 7) ☒ Claim(s) 4-8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 10/18/5, 12/4/6, 6/25/7 8/27/7.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date: ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Abstract Objection

1. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract *should not refer to purported merits of the invention* and should not compare the invention with the prior art. The abstract should be in narrative form and generally limited to a *single paragraph* within the range of 50 to 150 words. The abstract should not exceed 15 lines of text, MPEP §608.01(b).

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Claim Objections

2. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The explanation of

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instruction and bonding by surrounding or interlacing is implied by intrude and provides no patentable distinction regarding the embodiment.

3. Claims 4-8 are objected to under 37 CFR 1.75(c) as being in improper form because multiple dependent claims continue to refer to multiply dependent claims. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-3 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamoto et al. {Kamoto} (JP,2003-220660) in view of Bessey et al. {Bessey} (*Solid Phase Processing of Polymers*), Fourné (*Synthetic Fibers*), and Mehta (*Polymer Handbook*).

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Regarding Claims 1-3, Kamoto teaches a layered nonwoven laminate formed from spun-bond and melt-blown layers (Cm1 [0003 | 0024]). Methods of forming fiber intrusion by bonding, surrounding, or interlacing the fibers are taught through heat embossed calendaring, needle-punching, and hydroentangling [0020]. The fiber diameter ranges from about 1- to about 30- μm and about 2- to 10- μm preferably [0022]. The fabric density is about 3- to 100- $\text{g}\cdot\text{m}^2$ and usually 7- to 30- $\text{g}\cdot\text{m}^2$ [0023]. Polyester and nylon are taught as appropriate materials for the fabric layers [0033].

The intrusion index (based on the amount of bonding, surrounding, or interlacing [instant Claim 3]) is implied by the amount of entangling through embossing, needle-punching or hydroentangling that serve to bond or entangle fibers. While the intrusion index and bulk density lack description explicitly, these properties are inherent to the fabric because the embodiments are substantially identical with corresponding polymeric materials, fiber diameter, and fabric weight. Burden to prove otherwise is the Applicant's, see *In re Best*, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977) and *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980).

Optimization of the intrusion index is unpatentable, see *Peterson*, 315 F.3d at 1330, 65 USPQ2d at 1382. Polyester inherently ranges in crystallinity from 10- to 40-% ({Bessey} 93). The range overlaps for solution viscosity of polyester ({Fourné} 75) and polyamide 6 ({Mehta} 131) based on inherent polymer properties. Overlapping ranges are unpatentable, see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976).

Regarding Claims 9-11, Kamamoto teaches the basic method of forming steps that are claimed in the instant invention. Fibers are ipso facto spun from a

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thermoplastic resin in the spun-bond or melt-blown steps [0003]. Polyester inherently ranges in crystallinity from 10- to 40-% ({Bessey} 93); overlapping ranges are unpatentable, *Peterson*, 315 F.3d at 1330, 65 USPQ2d at 1382. Forming multiple layers of fabric entails placing fibers from one layer onto a fiber layer whose fibers have diameters corresponding with Applicant's definition of fineness [0022]. Integrating the fabrics is taught through embossing, needle-punching, or hydroentangling [0020] with heating pressurization [0026]. The range overlaps for solution viscosity of polyester ({Fourné} 75) and polyamide 6 ({Mehta} 131). Optimization of the bonding parameters temperature and pressure is unpatentable, see *Peterson*, 315 F.3d at 1330, 65 USPQ2d at 1382.

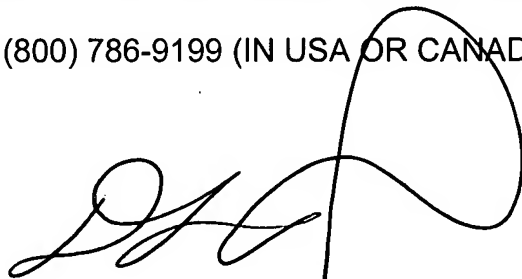
At the time of the invention, it would have been obvious to use claim inherent properties and overlapping ranges of polyester crystallinity {Bessey}, polyester solution viscosity {Fourné} and polyamide 6 solution viscosity {Mehta}, with the 3-layer fine fiber laminated and intruded nonwoven fabric {Kamoto}. The motivation would have been to optimize the properties through choosing materials whose behaviors are suited for the specific application [0033] and cost of the fabric through high speed spinning [0022] for the cost-driven disposable market [0001]. Thus, it would have been obvious to combine Kamoto with Bessey, Fourné, and Mehta and obtain the invention as specified.

Conclusion

Any inquiry concerning this communication from the Examiner should be directed to Shawn R. Hutchinson whose telephone number is (571) 270-1546. The Examiner can normally be reached on 7 AM to 5 PM, M-F, alternate Fridays off.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, D. Lawrence Tarazano can be reached on (571) 271-1515. The fax phone number for the organization where this application is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call (800) 786-9199 (IN USA OR CANADA) or (571) 272-1000.

A handwritten signature in black ink, appearing to read 'D. Tarazano', with a large, looping flourish extending upwards and to the right.

**D. LAWRENCE TARAZANO
PRIMARY EXAMINER**

Shawn R. Hutchinson
Examiner
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